CHEMISTRY 2261, Fall 2009, Section 2
(Organic Chemistry I)
MWF; 11:40 am-12:30 pm; 143 Coates

MWF; 9:40 am-10:30 pm; 002 Lockett

Instructor: Dr. Randolph Belter
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Office Hours: MWF 8:00-9:30, 10:30-11:40, 12:30-2:30 and gladly by appointment.

Textbooks: P. Bruice, Organic Chemistry 5th Edition, Pearson Prentice Hall, 2007 (ISBN: 0-13-196316-3) and Study Guide & Solutions Manual 5th Edition, Pearson Prentice Hall, 2005 (ISBN: 0-13-196328-7)
Material to be covered: Chapters 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, and 14 (**NOT** 12 and 13).

Highly Recommended: David R. Klein, Organic Chemistry as a Second Language John Wiley & Sons, Inc., 2004 (ISBN: 0-471-27235-3)

Supplementary Materials:
1. Syllabus and course outline, problem sets and answer keys will be posted via the internet and PAWS through **Moodle**.
2. TWO spiral or 3-ring dedicated notebooks of at least 100 pages.
3. Molecular Models and homemade flash cards are recommended.

Supplemental Instruction:
A Supplemental Instructor will be available for this course to offer additional instruction and office hours. Days and times to be announced.

Tutorial Center:
The LSU Center for Academic Success runs the Biology & Chemistry Tutorial Center in 263 Coates Hall. The hours will be Monday - Thursday: 11:00 AM - 5:30 PM, Friday: 11:00 AM - 3:00 PM; and you can contact them at: Phone: 578-7744, or email: www.cas.lsu.edu. There are also copies of a Chemistry Tutor List that contains tutors that charge $15.00/hr. These lists are located on the bulletin board in the hall outside 109 Choppin Hall.

Content: Tentative schedule of the chapters covered in this course.

Aug	24 Intro	Sept	21	Oct	19 Ch. 7	Nov	16
	26 Ch. 1		23		21		18 **TEST 5**
↓	28	↓	25 Ch. 6	↓	23	↓	20 Ch. 10
	31 Ch. 2		28		26 Ch. 14		23
Sept	2		30 **H**		28		25 **H**
	4	Oct	2 **H**		30		27 **H**
↓				↓			
	7	↓	5 TEST 2	Nov	2 **TEST 4**		30 Ch. 11
	9 **TEST 1**		7 **TEST 2**		4 Ch. 8	Dec	2
	11 Ch. 3		9 Ch. 5		6		4
	14		12		9		7 **Final** 3:00-5:00
	16		14	↓	11 Ch. 9		11 Final 3:00-5:00
	18 Ch.4		16 **TEST 3**		13		

Tests: There are five 100-point exams that cover the chapter most recently studied to that point. The final exam is 100 points, is cumulative, but will be weighted toward Ch. 10 & 11 material. There are no provisions for extra credit, dropped exams, do-overs or mulligans.

Grading: Grades will be based on the percentage of the total possible points that a student has earned. The instructor may, at his discretion, lower the thresholds. He will not raise any threshold, however.

90-100%	A	70-80%	C	less than 60%	F
80-90%	B	60-70%	D		

Absences:
If a student misses an exam, a make-up may be offered at the instructor's convenience. Otherwise, a substitute grade will be recorded that is the average of the previous and following exams (i.e. if exam 2 is missed, the average of Exam 1 and Exam 3). Written excuses must be supplied for medical absences. Absences mus No make-up exams will be given once the following exam has been given. The instructor may accept any excuse if it is mutually beneficial to the student in question and extremely convenient to the instructor without this action becoming a precedent for the class as a whole. Students will not be given extra time if they are tardy.

If a student is absent from the final exam, the reason for the absence must be extenuating, and it must be documented in writing by the student and deemed valid by the instructor and Dept. Chair (i.e. a written excuse from a physician). Weather conditions, transportation problems, childcare dilemmas, work schedules, relationship woes, etc. are not valid excuses for missing the final exam. If a student has an excused absence from the final exam, a special final exam will be given as soon as practical. The student will temporarily receive a grade of "I" (incomplete) for the course. An unexcused absence from the final exam will result in a score of "0" on the final exam. Students will not be given extra time for the exam if they are tardy.

Students having 3 or more FINAL exams may request permission to take no more than two exams on the day concerned.

If you are a qualified student with a disability seeking accommodations under the Americans with Disabilities Act, you are required to self-identify with the Office of Disability Services, Room 111A, Johnston Hall (578-5919).

Prerequisite Knowledge: The class meets 3 hours per week. A student should anticipate at least that much time devoted to this course outside of lecture each week for studying, reading, working problems, and preparing for class, not including preparation for exams. Students in this course are expected to possess a fundamental knowledge of General Chemistry, experience in solving chemistry-related problems, and proficiency in college-level mathematics and basic algebra. Students with weaknesses or deficiencies in any of these areas will likely need to devote much more time than 3 hours each week outside of class to adequately prepare for each lecture. It is a student's sole responsibility to ensure that he or she possesses the required skills and knowledge to complete this course.

Student Behavior and Classroom Decorum: Free discussion, inquiry and expression are encouraged in this class. However, classroom behavior that interferes with the instructor's ability to conduct the class or undermines the ability of any student to benefit from instruction is not acceptable. Examples include, but are not limited to: talking in class, being disrespectful to the instructor or another student, arguing, whining, making accusations, using beepers, cellular phones, or other electronic devices without prior approval of the instructor, entering or exiting the classroom in a disruptive manner, and so on. Any student possessing a pager or cell phone that goes off in class and is audible to the instructor will be required to leave class immediately. Cheating, copying, plagiarism and the like is abhorrent and will not be tolerated. Any classroom behavior that is deemed inappropriate by the instructor will result in the

student immediately being dismissed from class and referred to the appropriate University offices for disciplinary review. There will be zero tolerance for inappropriate classroom behavior.

Withdrawals: It is the obligation of the student to assure that he or she is properly registered for this course. The instructor is NOT responsible for dropping a registered student. Failure to attend does not constitute withdrawal. The last day to withdraw from classes with the University Registrar is **Nov. 6.**

Other Notes: It is the student's sole responsibility to keep copies of all course work until a final course grade is assigned and accepted. Since each student is keeping a copy of all graded work, each student can calculate his or her grade and standing in the course throughout the semester.

How to Ace this Class: Organic Chemistry cannot be learned in a few cram sessions before each exam. **The most efficient method for learning Organic Chemistry is a daily study program which includes working many problems.** Looking at a problem in the book and then looking up the answer in the study guide before really attempting the problem **is not** an efficient way to learn organic chemistry. If you don't know how to do a problem, go to the book and your notes to identify what you don't know so that you can do the problem, then you will have learned that material.

Most of the emphasis in Chemistry 2261 is on the language, structures, and transformations of organic chemistry, all illustrated by some reactions. One of your goals is to develop an understanding and insight into chemical behavior rather than simply memorize a catalog of reactions. Fundamental mechanisms will be used to help organize the wealth of material discussed. Your focus will be on solving problems by applying what you have learned about fundamental mechanisms and through working numerous synthesis problems. You will find that organic chemistry cannot be learned by cramming before each exam. **To do well in this course, you should expect to spend a minimum of 3 hours of outside study for every hour spent in class.**

Book problems (all problems in-Chapter and at the end of each chapter in your book): These problems are suggested to serve as a guide in your studying, and for use in self-testing your understanding of the subject matter in the Chapters and Lectures. Detailed answers to the problems are given in the Study Guide and Solutions Manual. Make certain that you have worked and understand all the problems given within Chapter sections we cover before proceeding with the problems at the end of the Chapters.

Online problems: In Middleton Library there is a comprehensive computer center to give you access to the Internet. The library computers all have a variety of programs for your use (word processing, printing, graphing programs, etc.). Your textbook has a website at http://wps.prenhall.com/esm_bruice_organic_4 (Note: use "Jump to…." bar at the top to get to the chapter you want). This site features online quizzes which include instant scoring and coaching, and interactive tutorials that illustrate key concepts. In addition, there are practice Exams posted by Dr. Frank Cartledge that can be found at: http://www.chem.lsu.edu/lucid/oldexams/oldexams_2261.html

Study Hints:

1. Take **your own notes** in class. Use a **pencil** not a pen! Mark important points with asterisks or a highlighter. Recopy your notes in **ink** as your first review of the notes.
2. Read the material in the book before it is presented in the Lecture and complete all the in-chapter problems of the material to be covered.
3. Make a schedule to **study regularly**, at least **two hours** everyday. It is very important to understand the new concepts presented in one Lecture for the following Lecture. Minimize memorization and maximize understanding of the material covered.
4. **Solve the study problems** at the end of the chapters and **afterwards** compare your answer with the answer in the Study Guide and Solutions Manual. Problem-solving will help you enormously to understand the material covered.
5. Use **molecular models** for a better visualization and understanding; organic chemistry is a 3-dimensional science.
6. Google!!!!!!!!!!

Reading Schedule

Lecture or Exam	Date	Subject	Topic(s)	Reading
Lect. 1,2	Aug 24, 26	Electronic Structure and Bonding	Atoms, Ionic and Covalent Bonds, Lewis Structures	1.1-1.4
Lect. 3	Aug 28,	Structure and Bonding Acids and Bases	Atomic and Molecular Orbitals, Bonding in Small Molecules	1.5-1.9 1.10-1.21
Lect. 4 5	Aug 31 Sept 2	An Introduction to Organic Compounds	Nomenclature and Representation of Structure	2.1-2.15
Lect. 6, 7	Sept 4 7	An Introduction to Organic Compounds	Conformations of Alkanes and Cycloalkanes	2.1-2.15
Lect. 8,9,10	Sept 11 14, 16	Alkenes: Structure and Nomenclature	Structure, Nomenclature, Isomerism	3.1-3.7
Lect. 11	Sept 18	Reactions of Alkenes	Thermodynamics, Kinetics, Carbocations, Regioselectivity, Carbocation Rearrangements	4.1-4.5
Lect. 12, 13	Sept. 21, 23	Reactions of Alkenes	Reactions and Synthesis	4.6-4.12
Lect. 14	Sept 25	Reactions of Alkynes	Addition Reactions, Acidity, Synthesis	6.1-6.6
Lect. 15	Sept 28	A. Reactions of Alkynes	Addition Reactions, Acidity, Synthesis	6.7-6.11
Lect. 16, 17	Sept 30, Oct 2	Holiday	Holiday	
Lect. 18, 19	Oct 7, 9	Stereochemistry	Isomers, Chirality Centers, Nomenclature, Optical Rotation, Multiple Chirality Centers	5.1-5.9
Lect. 20	Oct 12	Stereochemistry	Meso Compounds, Reactions	5.10-5.14
Lect. 21	Oct 14	Stereochemistry	Stereochemistry of Reactions	5.16-5.19
Lect. 22	Oct 19	Electron Delocalization and Resonance	The Structure and Bonding in Benzene	7.1-7.3
Lect. 23	Oct 21	Electron Delocalization and Resonance	Resonance Contributors, Resonance Energy, Chemical Consequences	7.4-7.11
Lect. 24	Oct 23	Reactions of Dienes	Diels-Alder, UV-Vis Spectroscopy, Nomenclature, Configurational Isomers and Stabilities, Reactivity,	Ch 7.12

			Electrophilic Addition	
		Electron Delocalization and Resonance	Resonance Contributors, Resonance Energy, Chemical Consequences	7.1-7.3
		Reactions of Dienes	Diels-Alder, UV-Vis Spectroscopy, Nomenclature, Configurational Isomers and Stabilities, Reactivity, Electrophilic Addition	7.4-7.12
Lect. 25	Oct 28	Aromaticity	Special Stability of Benzene, Molecular Orbital Theory	Chap 14.1-14.6
Lect. 26	Oct 30	Benzene reactions	Substitution of benzene	Chap 14.7-14.14
Lect. 27		Benzene reactions	Substitution of benzene	Chap 14.14-14.19
Lect. 28	Nov 4	Substitution Reactions	Substitution Reactions, S_N2 Reactions	Chap 8.1-8.4
Lect. 29	Nov 6	Substitution Reactions	Substitution Reactions, S_N2 Reactions	Chap 8.5-8.8
Lect. 30	Nov 9	Substitution Reactions	Substitution Reactions, S_N2 Reactions	Chap 8.8-8.12
Lect. 31	Nov 11	Elimination Reactions	E1 and E2 Elimination Reactions	Chap 9.1-9.3
Lect. 32	Nov 13	Elimination Reactions	E1 and E2 Elimination Reactions	Chap 9.1-9.3
Lect. 33	Nov 16	Elimination Reactions	E1 and E2 Elimination Reactions	Chap 9.1-9.3
		Elimination Reactions	E1 and E2 Elimination Reactions, Stereochemistry.	Chap 9.4-9.8
		Elimination Reactions	E1 and E2 Elimination Reactions, Stereochemistry.	Chap 9.9-9.11
Lect. 34	Nov 20	Reactions of Alcohols, Ethers, and Epoxides	Elimination Reactions of Alcohols; Reactions of Ethers and Epoxides	Chap 10.1-10.9
Lect. 35	Nov 23	Reactions of Ethers, Epoxides, and Sulfur Compounds	Reactions of Thiols, Sulfides, and Sulfonium Salts. Organometallic Compounds; Couplings	Chap 10.11-10.13
Lect 38	Nov 30	Radicals, Radical Reactions and Reactions of Alkanes	Reactivity, Chlorination, Bromination, Radical Reactions, Radical Substitution, Reactions and Stereochemistry	Chap 11
Lect 39, 40	Dec 2, 4	Aromaticity	Special Stability of Benzene, Molecular Orbital Theory	Chap 14.1-14.6

This information sheet and syllabus are subject to correction and modification.